

Appl. No. : 10/826,006  
Filed : 04/15/2004

### AMENDMENTS TO THE CLAIMS

Claims 1-36 were pending. Claims 1-15 and 21-36 are withdrawn from consideration.  
Please amend Claim 16, as shown below, and add new Claims 37-51, as presented here.

#### 1-15 (Withdrawn)

16. (Currently Amended) A device for measuring a concentration of an analyte one or more analytes in a liquid material sample, said device comprising:
- a separation device configured to separate the liquid sample into an analyte portion and a non-analyte portion;
- an optical source configured to emit electromagnetic radiation in a range of about 4.275 to about 10.060  $\mu\text{m}$ ;
- a detector positioned with respect to the source, so that the source and the detector define an optical path there between;
- a sample element configured to support a material an analyte portion of the liquid sample in said optical path;
- a first array of narrow band-pass filters disposed in said optical path between said sample element and said source, said first array of filters being configured to allow electromagnetic radiation of a first set of previously determined values to impinge on the sample element, the first set of previously determined values associated specially with a first analyte and one or more interferences to said first analyte; and
- a second array of narrow band-pass filters disposed in said optical path between said sample element and said source, said second array of filters being configured to allow electromagnetic radiation of a second set of previously determined values to impinge on the sample element, the second set of previously-determined values associated specially with a second analyte and one or more interferences to said second analyte.
17. (original) The device of Claim 16, wherein the second set of previously determined values includes wavelengths selected from the group comprising: about 7.8  $\mu\text{m}$ , about 8.3  $\mu\text{m}$ , about 10.55  $\mu\text{m}$  and about 10.7  $\mu\text{m}$ .
18. (original) The device of Claim 16, wherein the second set of previously determined values includes a wavelength of about  $10.55 \pm 2 \mu\text{m}$ .

Appl. No. : 10/826,006  
Filed : 04/15/2004

19. (original) The device of Claim 16, wherein the first array of filters comprises an electronically-tunable optical filter.
20. (original) The device of Claim 16, wherein the second array of filters comprises an electronically-tunable optical filter.
- 21-36 (Withdrawn)
37. (New) The device of Claim 16, wherein a single filter wheel comprises said first and second arrays of filters.
38. (New) The device of Claim 16, further comprising a wavelength array.
39. (New) The device of Claim 22, wherein the wavelength array comprises information stored in a computer memory.
40. (New) The device of Claim 16, wherein the separation device is a fluid filter.
41. (New) The device of Claim 40, wherein the fluid filter is configured to separate plasma from whole blood.
42. (New) The device of Claim 40, wherein the separation device is a filter.
43. (New) The device of Claim 40, wherein the separation device is a membrane.
44. (New) The device of Claim 16, wherein the sample element is further configured to position in said optical path a plasma sub-portion of the analyte portion of the liquid sample.
45. (New) The device of Claim 16, wherein the separation device comprises a fluid passage.
46. (New) The device of Claim 16, wherein at least one of the first or second arrays comprises a solid state electronically-tunable filter.
47. (New) The device of Claim 46, wherein the solid state electronically-tunable filter is configured to cycle its pass-band among a variety of narrow spectral bands.
48. (New) A method of measuring one or more analytes in a liquid sample, said method comprising:
  - extracting a liquid sample from a sample source;
  - separating the liquid sample into an analysis portion and a non-analysis portion;
  - emitting electromagnetic radiation from a radiation source along an optical path through the analysis portion, the optical path ending at a radiation detector;

Appl. No. : 10/826,006  
Filed : 04/15/2004

providing a sample element configured to position the analysis portion of the liquid sample in the optical path between the radiation source and the radiation detector;

providing a first array of narrow band-pass filters disposed in said optical path between said source and said sample element, said first array of filters being configured to allow electromagnetic radiation of a first set of selected values to illuminate the sample element, the first set of selected values selected to correspond to a first analyte and one or more first analyte interferences;

providing a second array of narrow band-pass filters also disposed in said optical path between said source and said sample element, said second array of filters being configured to allow electromagnetic radiation of a second set of selected values to illuminate the sample element, the second set of selected values selected to correspond to said second analyte and one or more second analyte interferences;

detecting the resulting radiation that reaches the radiation detector after passing through the first and second arrays of narrow band-pass filters and the analysis portion of the liquid sample;

analyzing the resulting radiation to obtain information regarding the one or more analytes in the liquid sample; and

saving the information in a memory.

49. (New) The method of Claim 48, wherein separating the liquid sample into an analysis portion and a non-analysis portion comprises filtering blood into a plasma portion and a non-plasma portion.

50. (New) The method of Claim 48, further comprising outputting the information regarding one or more analytes in the liquid sample to a display and indicating a concentration of at least one analyte.

51. (New) A device for measuring a concentration of one or more analytes in a sample, said device comprising:

a fluid filter configured to separate the sample into an analysis portion and a non-analysis portion;

an optical source configured to emit electromagnetic radiation;

Appl. No. : 10/826,006  
Filed : 04/15/2004

a radiation detector positioned with respect to the source, so that the source and the detector define an optical path there-between;

a sample element configured to position the analysis portion of the sample in said optical path;

a first array of narrow band-pass filters disposed in said optical path between said sample element and said source, said first array of filters being configured to allow electromagnetic radiation of a first set of previously determined values to impinge on the sample element, the first set of previously determined values associated with a first analyte;

a second array of narrow band-pass filters disposed in said optical path between said sample element and said source, said second array of filters being configured to allow electromagnetic radiation of a second set of previously determined values to impinge on the sample element, the second set of previously-determined values associated with a second analyte;

a computer memory configured to store an algorithm for processing the output from the radiation detector to determine the concentration of the first analyte;

a microprocessor having configured to accept output from the radiation detector and perform the algorithm stored in the computer memory; and

a display configured to show the concentration of the first analyte.